Meeting: 1005, Newark, Delaware, SS 16A, Special Session on Probabilistic Paradigms in Combinatorics

1005-05-191 **Yoshiharu Kohayakawa**, **Miklos Simonovits** and **Jozef Skokan*** (skokan@ime.usp.br), Instituto de Matematica e Estatistica, USP, Rua do Matao, 1010, 05508-090 Sao Paulo, SP, Brazil.
The 3-colored Ramsey Number of Odd Cycles.

For graphs $L_1, \ldots, L_k$, the Ramsey number $R(L_1, \ldots, L_k)$ is the minimum integer N satisfying that for any coloring of the edges of the complete graph K_N on N vertices by k colors there exists a color i for which the corresponding color class contains L_i as a subgraph.

In 1973, Bondy and Erdős conjectured that if n is odd and C_n denotes the cycle on n vertices, then $R(C_n, C_n, C_n) = 4n-3$. In 1999, Łuczak proved that $R(C_n, C_n, C_n) = 4n+o(n)$, where $o(n)/n \to 0$ as $n \to \infty$. In this paper we strengthen Łuczak's result and verify this conjecture for n sufficiently large. (Received February 08, 2005)